



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



INSTRUMENT APPROACH PROCEDURE CHARTS

IFR TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR take-off minimums other than standard, are listed below. Take-off Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are described below in text, or published separately as a graphic procedure. If the (Obstacle) DP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or a separate Departure Procedure volume (military), as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not assigned a SID or radar vector by ATC, an ODP may be flown without ATC clearance to ensure obstacle clearance.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard take-off rules and establishes take-off minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) take-off minima are published below. For military take-off minima, refer to appropriate service directives.

NAME TAKE-OFF MINIMUMS

BABELTHUAP, KOROR, PS

BABELTHUAP/KOROR (ROR)

AMDT 1 09015 (FAA)

TAKE-OFF MINIMUMS: **Rwy 27**, 400-1 or std. with a min. climb of 296' per NM to 500.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 700 then as cleared.

GUAM, GQ

GUAM INTL (GUM)

ORIG -A 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwys 6L, 6R**, 500-1 or std. with a min. climb 360' per NM to 800. **Rwys 24L, 24R**, 500-1 or std. with a min. climb of 300' per NM to 1400.

DEPARTURE PROCEDURE: **Rwys 6L, 6R**, climb runway heading to 800 before turning. **Rwys 24L, 24R** climb runway heading to 1400 before turning.

HANA, HI

HANA (HNM)

ORIG 05244 (FAA)

DEPARTURE PROCEDURE: Use LINDBERG DEPARTURE.

HILO, HI

HILO INTL (ITO)

AMDT 6 05356 (FAA)

DEPARTURE PROCEDURE: Use PARIS DEPARTURE.

NAME TAKE-OFF MINIMUMS

HONOLULU, HI

HONOLULU INTL (HNL)

AMDT 7 85269 (FAA)

DEPARTURE PROCEDURE: use HONOLULU DEPARTURE.

KAHULUI, HI

KAHULUI (OGG)

AMDT 6 09015 (FAA)

TAKE-OFF MINIMUMS: **Rwy 23**, NA-ATC.

DEPARTURE PROCEDURE: **Rwy 2**, climb on a heading between 310° CW to 053° from departure end of runway.

Rwy 5, climb on a heading between 307° CW to 040° from departure end of runway. **Rwy 20**, climb on a heading of 185° from departure end of runway.

NOTE: **Rwy 2**, bush/trees beginning 190' from departure end of runway, 362' left of centerline, up to 60' AGL/79' MSL. Pipe on building 339' from departure end of runway, 289' right of centerline, 20' AGL/25' MSL. Bush beginning 902' from departure end of runway, 637' right of centerline, up to 20' AGL/39' MSL. **Rwy 5**, trees 2359' from departure end of runway, 512' left of centerline, 56' AGL/75' MSL. Fence beginning 20' from departure end of runway, 299' right of centerline, up to 7' AGL/31' MSL. Bush/trees beginning 291' from departure end of runway, 300' right of centerline, up to 76' AGL/95' MSL. **Rwy 20**, bush 22' from departure end of runway, 236' right of centerline, 2' AGL/55' MSL. Bush/trees beginning 24' from departure end of runway, 173' left of centerline, up to 29' AGL/68' MSL.

22 OCT 2009 to 17 DEC 2009

22 OCT 2009 to 17 DEC 2009



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



PAC



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



KAILUA-KONA, HI

KONA INTL AT KEAHOE

DEPARTURE PROCEDURE: **Rwy 17**, northwest-bound climb runway heading to 500 then climbing right turn to assigned route; eastbound climb runway heading to 500 then climbing right turn, heading 360°, to 2000, then climb via V3. **Rwy 35**, northwestbound climb runway heading to 500 then climbing left turn to assigned route; eastbound climb runway heading to 2000 then climb via V3.

KAMUELA, HI

WAIMEA-KOHALA (MUE)

AMDT 1 05076 (FAA)

TAKE-OFF MINIMUMS: **Rwy 4**, 400-2 or std. with a min. climb of 240' per NM to 3100.

DEPARTURE PROCEDURE: **Rwy 4**, climb via heading 041° to 3100 then climbing right turn via heading 080° and MUE VOR/DME R-057 to 6000 to VELLA INT, then as assigned. **Rwy 22**, climb via heading 233° and MUE VOR/DME R-234 to 5000 to JASON INT, then as assigned.

NOTE: **Rwy 4**, windsock 158' from departure end of runway, 299' right of centerline, 25' AGL/2702' MSL. Fence 2754' from departure end of runway, 323' right of centerline, 12' AGL/2741' MSL. Tree 5200' from departure end of runway, 179' right of centerline, 50' AGL/2817' MSL. Tree 5331' from departure end of runway, 110' left of centerline, 50' AGL/2829' MSL. Tree 1.3 NM from departure end of runway, 739' right of centerline, 50' AGL/2864' MSL. Tree 1.3 NM from departure end of runway, 1741' left of centerline, 50' AGL/2889' MSL. Antenna 1.8 NM from departure end of runway, 1094' left of centerline 152' AGL/2992' MSL. Rising terrain beginning 1.5 NM from departure end of runway, 3.9 NM left of centerline, up to 13796' MSL. **Rwy 22**, cactus at departure end of runway, 191' left of centerline, 10' AGL/2668' MSL. Tree at departure end of runway, 353' right of centerline, 50' AGL/2687' MSL. Bush 673' from departure end of runway, 186' left of centerline, 30' AGL/2673' MSL. Pole 1058' from departure end of runway, 124' left of centerline, 20' AGL/2683' MSL. Rapidly rising terrain beginning 1.5 NM from departure end of runway, 4209' left of centerline, up to 5513' MSL.

KAPOLEI, OAHU ISLAND, HI

KALAELOA (JOHN RODGERS FIELD) (JRF)

ORIG 09295 (FAA)

DEPARTURE PROCEDURE: DME Required. **Rwys 4L, 4R, 11**, climb heading 200° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course. **Rwys 22L, 22R**, climb heading 224° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course. **Rwy 29**, climb heading 210° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course.

NOTE: **Rwy 11**, tree 1533' from DER, 831' left of centerline, 60' AGL/70' MSL. **Rwy 22L**, vehicles on road 305' from DER, 195' left of centerline, 15' AGL/26' MSL. **Rwy 29**, tree 1794' from DER, 573' left of centerline, 60' AGL/99' MSL.

22 OCT 2009 to 17 DEC 2009

22 OCT 2009 to 17 DEC 2009



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



PAC



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



KAUNAKAKAI, HI

MOLOKAI (MKK)

AMDT 5 05300 (FAA)

TAKE-OFF MINIMUMS: **Rwy 5**, std. with a min. climb of 395' per NM to 1600 or 1900-2% for climb in visual conditions. **Rwy 23**, std. with a min. climb of 446' per NM to 1600 or 1900-2% for climb in visual conditions. **Rwy 35**, 200-1 or std. with a min. climb of 441' per NM to 800.

DEPARTURE PROCEDURE: **Rwy 5**, climb via heading 040° to 1500 then climbing left turn direct MKK VORTAC, or climb in visual conditions to cross Molokai Airport southwestbound at or above 1800 via the MKK R-067 to MKK VORTAC, thence...

Rwy 17, climb via heading 169° to 1500 then climbing right turn direct MKK VORTAC, thence...

Rwy 23, climbing left turn via heading 170° to 1700 then climbing right turn direct MKK VORTAC or climb in visual conditions to cross Molokai Airport southwestbound at or above 1800 via the MKK R-067 to MKK VORTAC, thence...

Rwy 35, climb via heading 349° to 1500 then climbing left turn direct MKK VORTAC, thence...

...climb in MKK VORTAC holding pattern (hold NE, right turn, 236° inbound) to cross MKK at or above MCA/MEA for route of flight.

NOTE: **Rwy 5**, pole 2254' from departure end of runway, 222' right of centerline, 45' AGL/565' MSL, tree 1.12 NM from departure end of runway, 720' right of centerline, 50' AGL/675' MSL. Fenceline beginning 147' from departure end of runway, 177' left of centerline, up to 12' AGL/471' MSL. Multiple trees and bushes beginning 50' from departure end of runway, 273' left of centerline, up to 50' AGL/551' MSL. Obstruction light 1366' from departure end of runway, 79' right of centerline, 30' AGL/528' MSL. Multiple poles beginning 3065' from departure end of runway, 644' left of centerline, up to 45' AGL/623' MSL. Multiple trees beginning 4155' from departure end of runway, 184' right of centerline, up to 50' AGL/714' MSL. **Rwy 23**, tree 2.44 NM from departure end of runway, 747' right of centerline, 100' AGL/1264' MSL. Tree 2.82 NM from departure end of runway, 1753' right of centerline, 60' AGL/819' MSL. Tree 2.73 NM from departure end of runway, 2001' left of centerline, 60' AGL/919' MSL. Tree 2.03 NM from departure end of runway, 2006' left of centerline, 100' AGL/919' MSL. Pole 8021' from departure end of runway, 867' left of centerline, 42' AGL/642' MSL. **Rwy 35**, tree 2990' from departure end of runway, 1030' right of centerline, 50' AGL/648' MSL. Tree 3033' from departure end of runway, 740' right of centerline, 50' AGL/637' MSL. Tree 2497' from departure end of runway, 1106' right of centerline, 50' AGL/615' MSL. Tree 3835' from departure end of runway, 76' right of centerline, 50' AGL/620' MSL. Tree 3041' from departure end of runway, 728' right of centerline, 50' AGL/600' MSL. Tree 3569' from departure end of runway, 116' right of centerline, 50' AGL/596' MSL. Bush 28' from departure end of runway, 289' left of centerline, 15' AGL/461' MSL. Multiple bushes and trees 48' from departure end of runway, 48' right of centerline, up to 200' AGL/648' MSL. Multiple bushes and trees 28' from departure end of runway, 34' left of centerline up to 41' AGL/489' MSL. Multiple bushes beginning 107' from departure end of runway, 133' right of centerline, up to 15' AGL/492' MSL. Multiple bushes beginning 133' from departure end of runway, 43' left of centerline, up to 15' AGL/517' MSL. Road/vehicle 200' from departure end of runway, 62' right of centerline, 15' AGL/487' MSL. Pole 1.32 NM from departure end of runway, 867' left of centerline, 42' AGL/642' MSL.

KOSRAE, FM

KOSRAE (TTK)

ORIG-A 09071 (FAA)

CAUTION: Ships with masts to 200' traverse harbor entrance located on west side of runway.

DEPARTURE PROCEDURE: **Rwy 5**, left turn. **Rwy 23**, right turn, climb to 2000 or above before turning east.

LANAI CITY, HI

LANAI (LNY)

AMDT 5 09239 (FAA)

TAKE-OFF MINIMUMS: **Rwy 3**, 400-1 or std. w/ min. climb of 370' per NM to 2700 or 2500-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3**, climb heading 033° to 1720 before turning left. Climb heading 300° or 180° to intercept route or airway, then continue as cleared. Maintain maximum 210 kts until turn is completed or for climb in visual conditions cross LNY VORTAC eastbound at or above 3700. **Rwy 21**, climb heading 213° to assigned altitude. Eastbound - climb westbound to cross LNY VORTAC eastbound at or above 2700 and climb as cleared. Westbound - climb direct LNY VORTAC then via assigned route.

NOTE: **Rwy 3**, multiple poles, trees, and terrain beginning 2108' from DER, 1011' left of centerline, up to 200' AGL/2202' MSL. **Rwy 21**, lighted windsock 8' from DER, 191' right of centerline, 30' AGL/1323' MSL.

LIHUE, HI

LIHUE (LIH)

AMDT 8 00279 (FAA)

TAKE-OFF MINIMUMS: **Rwy 21**, 2400-3. Use DIANE DEPARTURE PROCEDURE.

DEPARTURE PROCEDURE: **Rwys 3, 35**, to V15, climb runway heading to 500 then climbing right turn, heading 125°, then as assigned. **Rwy 17**, to V15, climb runway heading to 500 then climbing left turn, heading 045°, then as assigned. To LIH-150 climb runway heading to 500 then climbing left turn, heading 120°, then as assigned. **Rwy 21**, to V15, climb runway heading to 550 then climbing left turn, heading 090°, to intercept LIH R-110, maintain 5000, direct BOOKE INT or as assigned. To LIH-148, climb runway heading to 550, then climbing left turn, heading 120°, to intercept LIH R-148, maintain 3000, direct NAPUA INT or as assigned.

POHNPEI ISLAND, FM

POHNPEI INTL (PNI)

AMDT 2 80079 (FAA)

TAKE-OFF MINIMUMS: **Rwys 9, 27**, 400-1½.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 500 then left turn for north or west departure. **Rwy 27**, climb runway heading to 500 then right turn for north or east departure. Climb runway heading to 1500 before turning for south departure.

CAUTION: Ships with superstructure to 150', traverse Ponape channel, 400' off approach end of Rwy 9, closing airport at times.

22 OCT 2009 to 17 DEC 2009

22 OCT 2009 to 17 DEC 2009



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PAC



TAKE-OFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES



SAIPAN, CQ

FRANCISCO C. ADA/SAIPAN INTL (GSN)
ORIG-A 09071 (FAA)

DEPARTURE PROCEDURE: **Rwys 7, 25**, climb on runway heading to 1600 before climbing on course.

ROTA INTL (GRO)

AMDT 1A 09071 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 1000 before turning. **Rwy 27**, climb runway heading to 2000 or above before turning south.

TINIAN ISLAND, CQ

TINIAN INTL (TNI)

AMDT 1 09239 (FAA)

NOTE: **Rwy 8**, trees beginning 694' from DER, 507' left of centerline, up to 100' AGL/363' MSL. Multiple trees beginning 569' from DER, 471' right of centerline, up to 100' AGL/389' MSL. **Rwy 26**, multiple trees beginning 743' from DER, 508' right of centerline, up to 100' AGL/363' MSL.

TUTUILA, AQ

PAGO PAGO INTL (PPG)

ORIG-A 09071 (FAA)

TAKE-OFF MINIMUMS: **Rwy 23**, std. w/ min. climb of 320' per NM to 800, or 2700-3 for climb in visual conditions. **Rwy 26**, NA-obstacles.

DEPARTURE PROCEDURE: **Rwys 5, 8**, climbing right turn southbound between TUT R-090 clockwise to R-180 to 2800, then proceed on course. **Rwy 23**, climbing left turn heading 150° southbound between TUT R-090 clockwise to R-180 to 2800, then proceed on course. For climb in visual conditions: cross Pago Pago Intl Airport at or above 2600 before proceeding on course.

NOTE: **Rwy 5**, bush 1' from departure end of runway, 237' right of centerline, 3' AGL/12' MSL. Bush 379' from departure end of runway, 362' left of centerline, 14' AGL/23' MSL. Ship 998' from departure end of runway, 57' right of centerline, 150' AGL/150' MSL. **Rwy 8**, bush 689' from departure end of runway, 360' left of centerline, 15' AGL/23' MSL. Ship 1435' from departure end of runway, 304' left of centerline, 150' AGL/150' MSL. **Rwy 23**, multiple trees beginning 352' from departure end of runway, 173' left of centerline, up to 20' AGL/132' MSL. Multiple trees beginning 881' from departure end of runway, 296' right of centerline, up to 20' AGL/172' MSL. Multiple trees and poles beginning 1.6 NM from departure end of runway, 38' right of centerline, up to 367' AGL/554' MSL. Tree 2.3 NM from departure end of runway, 2126' left of centerline, 20' AGL/387' MSL.

WENO ISLAND, FM

CHUUK INTL (TKK)

AMDT 1 82189 (FAA)

DEPARTURE PROCEDURE: **Rwy 4**, climb on runway heading to 800 before turning right. **Rwy 22**, climb on runway heading to 1200 before turning left.

CAUTION: Ships with superstructure to 150' traverse channels west of runway 4/22.

YAP ISLAND, FM

YAP INTL (T11)

AMDT 2 94342 (FAA)

DEPARTURE PROCEDURE: **Rwys 7**, climbing right turn to 1500 via 090° bearing from YP NDB/DME, then climb on course. **Rwy 25**, climb to 500, then climb on course.

22 OCT 2009 to 17 DEC 2009

22 OCT 2009 to 17 DEC 2009



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PAC